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Moving Target 26

COVER STORY President Obama aims to fix U.S. cybersecurity. Will his plan hit the mark?

BY KIM S. NASH





FROM THE
EDITOR IN CHIEF

start

Target Practice

If you've ever played the silly, maddening game known as "Whac-A-Mole," you know what futility feels like. As you smack one mole with the mallet, up pops another one. Their speed and number escalates as you flail away, trying to keep up.

At some point, you realize there's no hope of winning.

It's hard to imagine more appropriate imagery for our cover story ("Moving Target," Page 26) about the widespread frustration with mounting cybersecurity threats and the lack of an effective U.S. government response. CTO Daniel Mintz of consulting firm CSC aptly describes the feds' "Whac-A-Mole security" approach as one where long-term strategy takes a back seat to daily tactical responses.

There are certainly high hopes for President Obama's sharpening focus on cybersecurity. But we're still at the flailing-away stage of this game. Even with at least three dozen federal mandates, laws and regulations governing IT security around critical infrastructure, no one feels safe from the potential of computerized attacks taking down electricity grids, subways, banks or even weapons systems.

"I can't think of anyone with real knowledge of what's going on who would say he feels confident in our ability to defend ourselves," says John Gilligan, former CIO of the U.S. Air Force. Now a respected security consultant, Gilligan has created a set of 20 pragmatic guidelines for defending digital infrastructure.

Gilligan's everyday controls (see Page 30) are highly useful as a risk-management review of best practices in monitoring IT systems and network security (full details at www.gilligangroupinc.com).

Also well worth your time in this issue is "The Business of IT" (Page 22), a new column by Albert R. Eng, a former CIO from the private equity world who now advises companies on IT strategy and finance. In "What Your Budget Really Means," Eng candidly spells out why your IT budget should be structured into just three categories of projects (strategic, deferred and lights-on).

Finally, I have one more assignment for you: Go away. Take that overdue vacation. As our experts advise in "Wish You Weren't Here" (my favorite headline of 2009 so far), CIOs need to set a healthy example by taking time off to regroup, refresh and renew.

So go, enjoy yourselves. The moles will keep.

Maryfran Johnson, Editor in Chief, CIO Magazine & Events
mfjohnson@cio.com

CHATTER

Where the IT Pros Are

What do mild-mannered software developers do for extra cash? Increasingly, **they're taking over the turntables in clubs and private parties**, CIO.com Senior Editor Meridith Levinson reports, bringing their IT skills to a whole new level. Read how digital DJ'ing—playing and mixing MP3s using a computer and special software—has emerged over the last decade. www.cio.com/article/494129

Meanwhile, Levinson says she's having difficulty believing an ISC-squared report that 80 percent of hiring managers looking to fill IT security jobs **are having a hard time finding qualified candidates**. The top three reasons, according to the report: Candidates lack the right skill set, there are too few qualified professionals in the hiring managers' area and companies can't meet candidates' salary requirements due to budget constraints. What do you think? advice.cio.com/node/8001

Inside the Vendor Mind

Software arch-rivals SAP and Oracle take **starkly different approaches to CEO succession planning**, as do "frenemies" Microsoft and Apple, writes CIO.com Senior Editor Thomas Wailgum. Who's right is up for debate, but one thing is clear: **more information on who will be steering the ship is better**. www.cio.com/article/494128

On his blog, Wailgum shares a **YouTube video poking fun at the vendor-client relationship**. The video takes the seemingly normal business dealings between two parties and plunks them in real-world situations—at a restaurant, in a video store, in a hair salon. advice.cio.com/node/7968

iPhone-Free Zone

Last month, Apple unveiled its latest two devices—the 16GB and 32GB iPhone 3G S. That's great if you're an iPhone ►►►

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FROM THE **CEO**

Refresh Your Mind

Imagine walking down a street in an unknown city and with every 10 steps, someone asks you a question in a different language. Being the kind of person you are, you take the time to listen, translate the bits you can understand and then answer each question to the best of your ability and perspective.

This make-believe scenario isn't so far from the truth when it comes to the daily life of today's CIO.

Every 10 steps down the hall, you're being bombarded by a litany of questions from colleagues who want your unique perspective on how to apply technology to drive business value and innovation. This challenge to provide ongoing business guidance with tech-savvy insight is not only necessary for a CIO's success, but vital to every business trying to navigate the economic hailstorm.

This is why I'm personally inviting you to attend our annual CIO 100 Symposium next month, August 23-25, at the Broadmoor in Colorado Springs, Colo. This year's theme is "Innovating for Customers, Collaboration and Cost Management," and I can't think of a better focus for the sessions and speakers we've assembled. Along with the chance to hear about some of most innovative, value-delivering IT/business projects of the past year, you'll also have the opportunity to learn directly from some of the best in the business—CIOs such as Ben Fried of Google, Ramon Baez of Kimberly Clark, Tom Conophy of InterContinental Hotels, Phil Fasano of Kaiser Permanente, Joe Eng of JetBlue, Randall Spratt of McKesson and many more.

They will stretch your mind and fill your conference notebook with actionable advice to apply immediately to your business. To see the kind of company you'll be keeping at this legendary event, check out our 2009 CIO 100 winners, already posted on our website (www.cio.com/cio100/2009/1). They'll also be featured in *CIO* next month.

A very wise man once told me that to be a successful leader you "need to know what you know and, more importantly, know what you don't know." This is one event where I can promise you'll find unparalleled opportunities to share your knowledge, exchange business ideas and pick up new best practices from some of the leading CIOs in the world today. Come join us!

Michael Friedenber, President and CEO
mfriedenber@cio.com

►►► **Chatter** Continued from Page 4

fanatic. But if you're in the market for a different type of smartphone, CIO.com Staff Writer Al Sacco's **slideshow reviews eight fresh alternatives**. www.cio.com/article/494584

Hang It Up

You've probably heard of "BlackBerry Thumb"—a condition similar to carpal-tunnel syndrome. But now there's a **new ailment: cell phone elbow** (officially, cubital tunnel syndrome). It's caused when abnormal pressure is applied to nerves in the forearms for extended periods of time, impeding the flow of blood, leading to discomfort and pain. www.cio.com/article/494712

Microsoft's New Reality Show

Watch out Donald Trump, Microsoft is on your heels. Senior Online Writer Shane O'Neill writes about the software giant's new Web show, *It's Everybody's Business*. The program features former **GE honcho Jack Welch and his wife Suzy**, giving guidance to real-life companies that are wrestling with business and technology quandaries. www.cio.com/article/495041

A No Tech Sales Pitch

High-tech sales pitches are so yesterday. The new trend? Engaging customers with a whiteboard and marker, writes CIO.com's Wailgum. He details **how salespeople at Software AG took pen in hand to boost sales**. www.cio.com/article/494624

Track Your Tweets

Ever wonder if that great tweet you wrote got retweeted widely? CIO.com Staff Writer C.G. Lynch describes **how to measure your Twitter success**. www.cio.com/article/494611

Compiled by Associate Editor Kristin Burnham. Have a comment about a story in this issue? Go to www.cio.com/magazine/070109 or write to letters@cio.com.

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News Scan

Trend: Warmer Data Centers

The 68-degree data center may be out of style, says Jim Simonelli, chief technical officer at the Schneider Electric-owned APC.

Servers, storage and networking gear are often certified to run in temperatures exceeding 100 degrees, and now IT pros are becoming less stringent in setting temperature limits, he says.

According to Simonelli, data center professionals could save up to 50 percent of their energy budget just by changing the set point for cooling from 68 degrees to 80 degrees.

Network World

GE Offers Loans for E-Health Tech Buys

GE announced it will offer doctors and hospitals loans that carry no interest until the institutions start receiving government money. The loans are for buying GE's Centricity electronic health records as conventional PC software or as a Web-based offering, solving the problem of a shortage of upfront capital. *The New York Times*

Stability for IT Budgets?

IT budgets appear to be stabilizing, according to an exclusive *CIO* survey. Among 171 CIOs who took the survey, 69 percent said they postponed discretionary projects in the past six months, up from 58 percent in January. Sixty-four percent of respondents said they froze hiring, up from 59 percent in January. But only 3 percent said they still have plans to freeze hiring before the end of the year.

That doesn't mean IT spending is recovering. Only 14 percent of CIOs expect budget increases in the next 12 months, down from 20 percent at the beginning of the year. Hardware (47 percent), outsourced IT services (40 percent) and IT compensation costs (40 percent) are the most frequently cited categories where CIOs are cutting.

Those cuts may be slowing, however. Although more CIOs plan to shrink payroll than in January, more also now say that their spending on compensation won't change. Fewer IT leaders plan cuts to outsourced IT services, while a higher percentage anticipate no reductions. (For complete results, go to www.cio.com/economy_may09.) *CIO.com*

Microsoft User Group Demands Opera Boycott

A Microsoft enthusiast group is calling for the boycott of Opera Software's products. According to a blog post by David Taraso, editor of the JCXP group, which hosts user forums about Microsoft software, the group targeted Opera because the Oslo-based company filed an antitrust suit against Microsoft in Europe.

The suit, which argues against Microsoft's inclusion of the Internet Explorer (IE) browser with Windows, has been controversial. The European Commission was mulling a remedy, dubbed the "ballot screen," that would require PC makers to give users other browser options. According to the JCXP, the ballot screen option is a "ridiculous idea" that would require Microsoft to promote competing products within Windows. As a result of the fuss, Microsoft said it won't include IE 8 in the version of Windows 7 that is sold in Europe. *IDG News Service*

Nokia to Offer Apps for Rural Mobile Users

Nokia will roll out its Life Tools services to more emerging markets after a successful pilot in India, a company executive said in June.

Services aimed at farmers include local weather forecasts, crop prices at local markets, advice on growing crops, as well as pricing information for pesticides, seeds and fertilizer. Services also include English lessons and advice on taking exams. *IDG News Service*

Green Dam Maker Ordered to Fix Security Holes

The head of the company that created the Web-filtering software that the Chinese government will require on all new PCs acknowledged that the current version of the software contains security flaws. This is the latest blow to China's plans for the software, which was criticized for its potential to block nonpornographic and politically sensitive content. A U.S. maker of Internet filtering software has also alleged that parts of Green Dam's code were stolen from its own, similar program.

Last month, researchers at the University of Michigan said that tests of the software, called Green Dam-Youth Escort, found that it contained programming errors that would expose computers to attack. *The Wall Street Journal*



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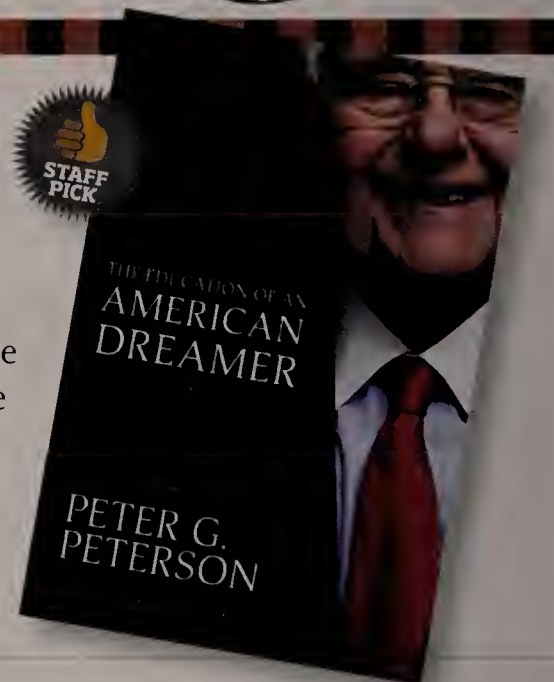
what we're Reading

The Education of an American Dreamer

How a Son of Greek Immigrants Learned His Way from a Nebraska Diner to Washington, Wall Street and Beyond

By Peter G. Peterson

Peterson chronicles his rise from a small Nebraska town where he manned the cash register at his father's diner through his tenure (and public firing) as the youngest Cabinet member in the Nixon administration, his tumultuous days at Lehman Brothers and the creation of The Blackstone Group, which made him a billionaire at age 80. *Hachette Book Group, 2009, \$34.99*



CIO Dashboard

Cutting Through the Noise

By Chris Curran

BLOG Looking for a list of CIOs to follow on Twitter? Chris Curran, partner and CTO at Diamond Management & Technology Consultants, has generated the "CIO Twitter Dashboard," a compliment to his blog, which covers such topics as portfolio management, Agile development and social networking. The CIO Twitter Dashboard is organized by industry, making it easy to search for and follow those with similar interests to yours. www.ciodashboard.com/cio-twitter-dashboard

Why New Systems Fail

Theory and Practice Collide

By Phil Simon

BOOK Some projects are going to fail. But organizations often lack the necessary framework to minimize the chance of failure, says Phil Simon, author and independent consultant. This book examines the root causes of project failures, provides case studies and lessons from real system implementations and offers pragmatic advice for deploying new systems and maintaining existing ones. *AuthorHouse, 2009, \$24.95*

The Accidental Successful CIO

By Jim Anderson

BLOG What can a CIO learn from Disney? According to Jim Anderson, who calls himself the "business side of IT

expert," a lot more than you'd think. (One of Anderson's posts shares management tips from Disney CEO Robert Iger.) Anderson's blog offers his insights into getting business and IT to work together better and making your IT department a more valued part of the company.

www.theaccidentalsuccessfulcio.com

Call IT Anything

By Dale Sanders

BLOG Dale Sanders, CIO and VP of IS at Northwestern Medical Faculty Foundation, writes about issues that concern most healthcare CIOs, such as the adoption of electronic medical records, data warehousing and his thoughts about personalized medicine.

callitanything.blogspot.com

The Silver Lining

An Innovation Playbook for Uncertain Times

By Scott D. Anthony

BOOK In today's economy, executives' gut reaction often is to freeze all spending. But that's not the answer, says Scott D. Anthony. He shares how managers can apply principles of disruptive innovation to manage the ultimate business paradox: cutting costs while innovating for growth. *Harvard Business Publishing, 2009, \$25*

Compiled by Associate Editor Kristin Burnham. Tell us what you're reading. Go to advice.cio.com/blogs/the_techie_reading_list or write to letters@cio.com.

**OVER \$105M
SPENT MONTHLY
Cleaning Infected
Computers** page 3C

**Over \$3 Billion
Spent Managing
Content Security Solutions**

TECHNOLOGY
**Employee Productivity Losses
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continued on 8D

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■ PAGE 6B

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A full-page background image of a camel standing in a desert. The camel is facing right, looking up towards the sky. The sky is filled with dramatic, dark clouds. The desert floor is sandy with some sparse vegetation in the distance.

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Innovation NYT-Style

Rapid development fuels the newspaper's Web-focused R&D

BY STEPHANIE OVERBY

Almost everybody has a theory about how to save the U.S. newspaper industry. The only consensus, it seems, is that it needs to change fundamentally or it could all but disappear. At *The New York Times*, tough times have elevated IT-enabled innovation to the top of the agenda.

A research and development group, created in 2006, operates as a shared service across nearly two dozen newspapers, a radio station and more than 50 websites. "Our role is to accelerate our entry onto new platforms by identifying opportunities, conceptualizing and prototyping ideas," explains Michael Zimbalist, the company's vice president of R&D.

Zimbalist's staff of 12 includes experts in rapid prototyping, specialists in areas like mobile or cloud computing and data miners who probe website data for insight into what visitors do. They work within a common framework based on idea generation, development and diffusion throughout the business. Recent projects included prototypes for new display ad concepts, as well as BlackBerry applications for Boston.com and the expert site About.com. ▶▶

.... **↑12.7%** Q1 smartphone growth Gartner **63%** Manufacturers who say that failed suppliers have the worst impact on their business Economist Intelligence Unit **↓10%** Expected U.S. capital spending this year McKinsey

The team's work is intended to supplement and support innovation taking place within the business units. For example, the team is prototyping E-Ink, an emerging display technology that some business units can't spare the resources to investigate.

At NYTimes.com, CTO of Digital Operations Marc Frons's design and product development group worked with Zimbalist's team and Adobe developers on the Times Reader 2.0 application, the next generation, on-screen reading system it developed on the Adobe AIR platform. Frons further encourages forward thinking among his 120-person team with twice-annual innovation contests. Winners receive cash, recognition and the resources to turn their ideas into reality.

Typical projects are measured against criteria like revenue potential or journalistic value. R&D projects aren't. "Since we build software, there's no huge capital investment up front," Frons says, "which allows us to experiment. The emphasis is on rapid development."

Times Widgets, a widget-making platform, was a contest winner, as was the recently launched Times Wire, a near real-time customizable interface for online content. "We're trying to solve specific problems and think about where the business is going," Frons says. The company posted an operating loss of \$74 million in the first quarter; Frons is focused on enhancing revenue, cutting costs and increasing efficiency through process improvements and automation.

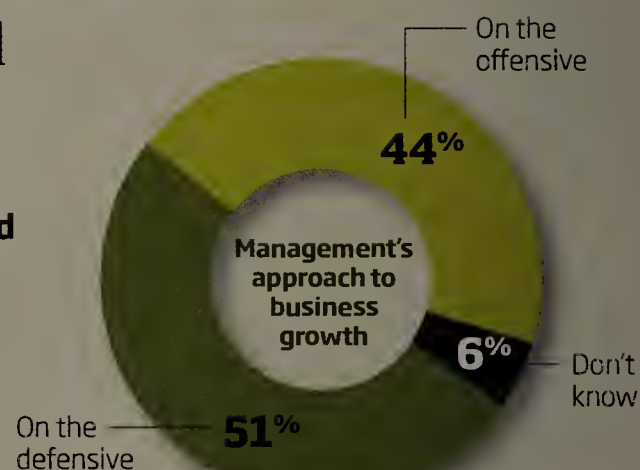
Much of what has come down the innovation pike thus far at *The New York Times* can be classified as process or product innovation. Typically, a healthy and growing company should be content with focusing 90 to 95 percent of its innovation dollars on such core business innovation and 5 percent or 10 percent on new business models, says Mark Johnson, chairman of strategic innovation consultancy Innosight. However, he adds, "The newspaper industry is in so much trouble that business model innovation is more important than ever."

Now is a good—and bad—time for fostering such innovation. "You've got the leadership's attention you need," says Johnson. "But it's harder in the sense that there's an urgency to fix the financials, and being patient in the way you need to be for a new business model to unfold is a very difficult thing to do."

Stephanie Overby is a freelance writer based in Massachusetts.

In Survival Mode

More companies say they'll spend the next year trying to stem losses rather than pursue new sources of revenue



Numbers do not add to 100% due to rounding

SOURCE: Economist Intelligence Unit

Google Wave on Horizon

The new Google Wave, due out later this year, mixes old technologies such as e-mail, IM and online documents into a unified, socially oriented view that could ultimately change the way we deal with online applications and information.

The idea behind Wave isn't based on putting information into tidy folders like you'd find on Microsoft SharePoint but on the notion of letting information flow freely for users to interact with in real-time, like we do on the consumer Web.

Today, employees must sort through messy "reply-all" e-mails to engage with content as a group. Businesses could use a technology like Wave to enable employees to collaborate in a more streamlined way. Yet most enterprises still remain years away from switching to this type of information stream, tied as they are to their current technology infrastructures.

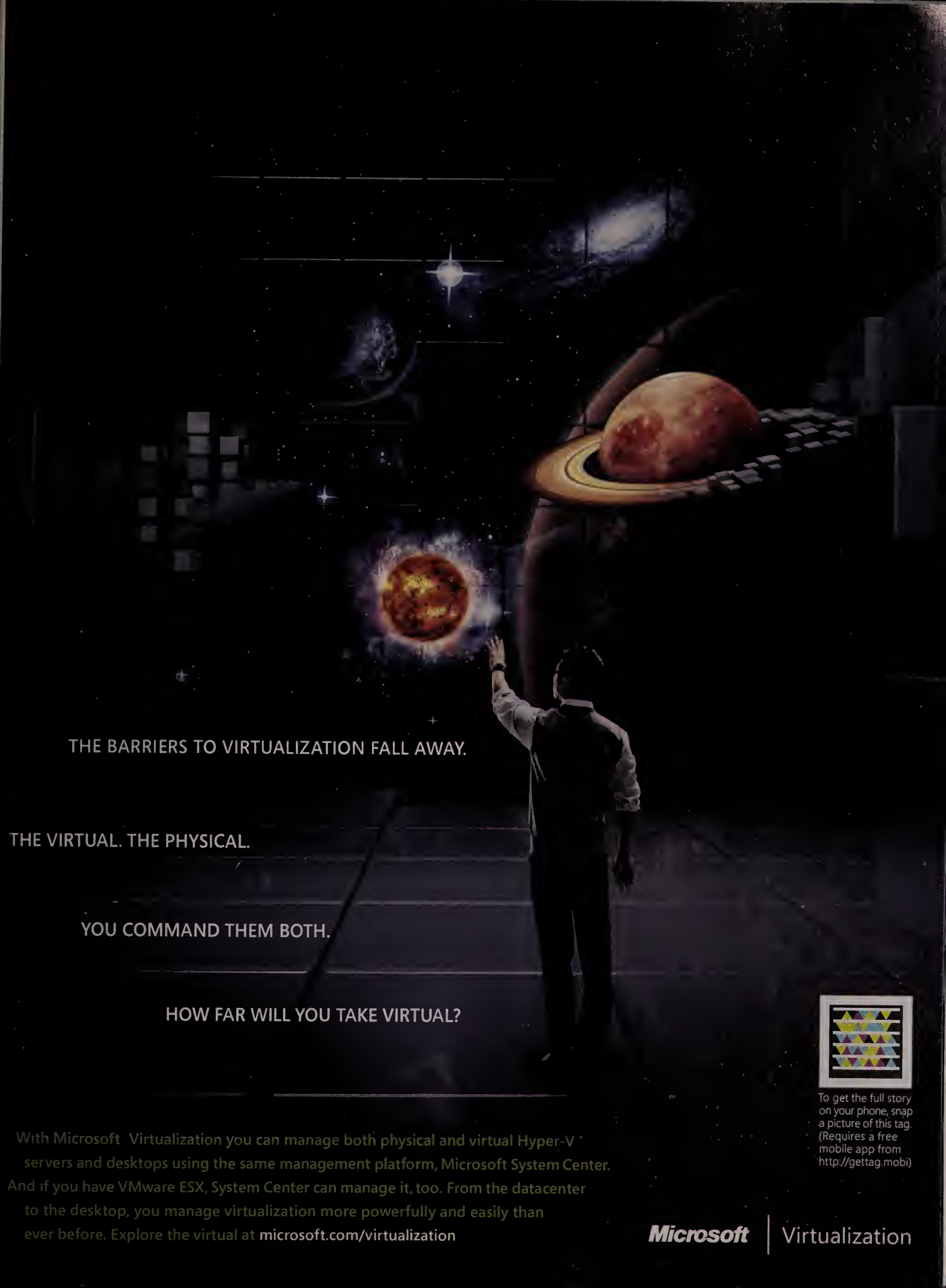
Google should (and likely will) try to incorporate Wave into its enterprise business software, Google Apps. In the end, Wave's greatest asset could be in making all this information more useful from ties to Google's core product: search.

-C.G. Lynch

"The emphasis is on rapid development."

-Marc Frons, CTO, NYTimes.com

.....15% Average number of U.S. citizens without health insurance Health Affairs\$405 million
Expected Kindle book revenue, 2009 Piper Jaffray↓34% U.S car sales in May Autodata



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THE **TOP LINE** INTERVIEW :: **Guy Kawasaki**

Innovation on a Budget

Inspiration is free and development tools are cheap, says the venture capitalist



You cofounded Alltop, which aggregates Web content. How might its beginnings illustrate an innovation lesson?

We created it because we noticed that 'popurls', a site that aggregates business and tech feeds, generated as much traffic as Google for another site that we owned. Because of this, we got curious about popurls and decided to copy what it was doing. The lesson here is watch what others do that succeeds and don't be proud about what inspires your innovation.

For companies that are interested in innovating now, what would you recommend?

At an intellectual level, no company laid off its way to success. On the other hand, it's easy for 'experts' to say that one must keep innovating when your company is running out of cash since it's not their necks on the line. There are no magic bullets. It's just a tough time.

That said, one assumption that companies should not make is that money equals innovation. That is, two guys or gals

in the lab might create the great innovation. It doesn't have to be the \$10 million budget for R&D. I could make the case that money can't buy innovation—if it did, then large companies would get larger and startups would never innovate.

But what if you're stuck at a company that doesn't want to innovate?

I'd say use open-source tools to build your prototype at night and on the weekends.

The most beautiful

trend in innovation is that it's getting cheaper to innovate for many types of products. Two gals in a garage can do a lot of damage now—indeed, this puts large companies at risk. A second beautiful trend is that you can deploy innovation faster and cheaper now with Web-based products and services compared to the old days when you shipped out upgrade kits and manuals.

—Diann Daniel

Read the full version at www.cio.com/article/482286.

NEW MARKETS

Entertainment Superhighway

With car-based TV options expanding, are data services next?



WHO IS DOING IT: Auto dealers are offering car buyers AT&T's CruiseCast satellite TV service. The service, which launched in April, costs \$28 a month for 22 channels including Disney, MTV and MSNBC. Chrysler offers a competing service from Sirius in selected models.

HOW IT WORKS: An antenna on a car transmits broadcasts to TV screens through an in-car receiver. One tuner in the receiver limits screens to the same program, but multiple tuners are planned for viewers to choose separate programs. Signals could be easily blocked by items like road signs, but images are buffered for up to 2 minutes to offer a continuous flow of programming. RaySat provides the equipment, including a remote control, through distributors for around \$1,299, but it could be available as an option when buying a car.

GROWTH POTENTIAL: Demand for in-car entertainment systems is growing, says Nick Cappa, a spokesman for Chrysler. But average consumers may instead adopt video delivery over mobile Internet because of the larger reach of 3G cell phone networks, says Thilo Koslowski, vice president of automotive technology at Gartner. CruiseCast may extend beyond video to data services, location-based advertising, traffic, weather and, potentially, high-speed Internet access.

—Agam Shah



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Getting Process in Gear

BPM truce welds IT-business goals **BY KRISTIN BURNHAM**

In 2007, **NACCO Materials Handling Group (NMHG)**—a manufacturer of warehouse trucks and forklifts—was using a manual system of spreadsheets and signatures to track design changes in its production line. Yet the company soon learned that its lack of an automated process was allowing for missed signatures, leading to some defective designs. Additional costs incurred from product recalls forced NMHG to explore a new option: a product lifecycle management (PLM) implementation.

When the team of IT and business managers presented the PLM plan to the CEO, however, he was immediately wary, recalls Bob Shallow, director of global product development processes, systems and operations. “This was right on the heels of a very painful and expensive SAP implementation, and our CEO was a little gun shy to spend a lot of money on PLM,” Shallow notes. “So—almost by accident—we started talking about leveraging a [business process management] tool.” ▶▶▶

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NMHG IT director **Gidu Sriram**'s team needed convincing that BPM tools were the best option.



Where Green IT Is No Fad

BY RICK SWANBORG

Corporate sustainability programs that address efficiencies throughout an organization will make the greatest impact over time. Following that premise, Raytheon's sustainability initiative involves a green IT strategy as one of several ways the company is reducing energy consumption, greenhouse gas emissions and other environmental impacts. The company has realized its initial greenhouse gas reduction goal, with Raytheon IT delivering measurable environmental and operational improvements as part of the enterprisewide effort.

The Situation: Approximately 90 percent of Raytheon's greenhouse gas emissions come from energy consumption. As a charter member of the U.S. Environmental Protection Agency's Climate Leaders program, Raytheon committed to reducing greenhouse gas emissions by 33 percent per dollar of revenue between 2002 and 2009. The company exceeded its goal by realizing a 38 percent cut by 2008. Raytheon's green IT strategy focused initially on the company's data centers, where space and power constraints offered opportunities.

What They Did: Raytheon virtualized or decommissioned 1,300 servers and established common database services to reduce system acquisition, power and cooling costs. IT encouraged Raytheon's businesses to use shared resources by offering a discount that trumped dedicated resources. Server virtualization enabled Raytheon to avoid building a major data center despite a 25 percent growth in capacity demand. Green IT projects produced more than \$11 million of savings in 2008.

The company's IT project management process now includes power reviews to ensure that project teams estimate power consumption of new systems and work in advance to achieve reductions. IT also helps other Raytheon functions consider how technology can help them operate more efficiently through automated energy management, reduced travel and commuting or progress toward a paperless office.

Why It Was Unique: By enveloping initiatives like data center virtualization within a broader sustainability strategy, Raytheon's green IT program represents more than a short-term means of saving money. Raytheon's overarching commitment to reducing its environmental impact provides a more compelling case for stakeholders than a technology-focused program.

The Takeaway: Being lean and green are two sides of the same coin. Raytheon shows that a continued focus can generate tangible, sustained benefits for both the organization and the environment.

Rick Swanborg is president of ICEx and a professor at Boston University. A full case study can be found at www.icex.com.

That move that would save them millions.

Shallow, a 15-year veteran of Ford Motor Company, learned about a similar, successful BPM operation there using a product from Lombardi Software called Teamworks. So he and his NMHG team discussed using the same Lombardi tool. They estimated they could meet about 80 percent of their requirements at about 15 percent of the investment level, resulting in a 200 percent ROI. With the PLM tool, the ROI estimate was in the 30 percent range. Their CEO gave Shallow's team the green light.

Shallow next met with Gidu Sriram, NMHG's IT director, to discuss logistics for the implementation. Instant opposition was the reaction Shallow and his business-side team received from Sriram's IT department. "There was quite a bit of friction between myself and IT going into the project," Shallow recalls, as Sriram's team members felt that an alternative tool should be considered. "All we wanted was an opportunity to take a look at other alternatives in order to make an objective decision, rather than just having someone tell us that this was the way to go," Sriram explains.

Sriram and Shallow agreed to hear presentations from Lombardi and the PLM vendor and to discuss their products. After the meetings, everyone was asked for feedback, and Lombardi emerged as the overwhelming winner. IT Director Sriram says that while their initial meetings were tense, they ultimately learned to trust the business more. "And hopefully we gave the business confidence that they can rely on us to look at projects objectively," he adds.

Since they needed to demonstrate the business value quickly, the IT and business teams agreed on an aggressive schedule, completing the project in two weeks rather than the more-typical two months. "My team was tremendously stretched, but we managed to pull through and maintained a very positive attitude to support the business," Sriram says.

Most importantly, the business benefits were significant, with a savings of \$2.5 million by choosing the BPM tool over the more complex PLM system. NMHG is now able to bring products to market faster and eliminated recall costs. More BPM rollouts also followed the first wave, with one completed in May and another scheduled for completion by December.

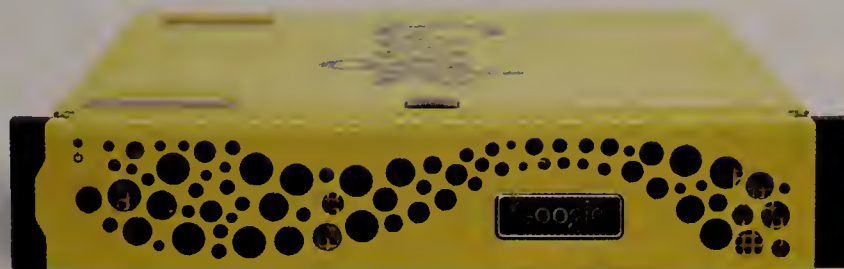
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What Your Budget Really Means

Can anyone tell what IT contributes to your business just by looking at what you spend? If they can't, you're less effective. **BY ALBERT R. ENG**

Savvy business leaders will always support wise IT spending. Meanwhile, astute financial management of IT gives CIOs flexibility to respond quickly to corporate actions such as the sale of a business unit or an acquisition.

This makes a properly managed IT budget one of the most important components in a CIO's arsenal. If you are to survive scrutiny by business heads, executive peers or potential acquirers, you must be prepared to properly explain each cost allocated, defend why you spent that money and demonstrate how it benefited the business. In this way, you provide a quantitative view of IT's value.

No doubt you agree, yet many IT budgets miss the mark. As a private equity IT advisor for Cerberus Capital Management, I examined dozens of IT budgets in varying industries. I found many that were so fragmented that the details could not be reconciled with aggregate line-items. In others, centralized costs were allocated equally across lines of business that used IT to different degrees and with varying benefits. Many budgets didn't carry their forecasts beyond one fiscal year. Nothing is more disheartening to a major investor or internal business head than to review a multimillion dollar IT budget that cannot be valued, explained, reconciled and forecasted.

That's no way to create confidence. You need to structure your budget so that your expenditures can be fully explained and so you have enough flexibility to handle various corporate actions and reviews.

Show Where the Money Really Goes

No matter how strategic IT is to your company, from an accounting or investment perspective, it's going to be treated as a cost center. Your annual operating expenditures (OpEx) will be rolled into the selling, general and administrative expenses part of the income statement. IT capital expenditures (CapEx) are capitalized on the balance sheet and amortized over the useful life of the investment.

Your IT budget is probably handled in a similar way. However without the proper detail behind these gross amounts, assessing the quality of operations for your IT organization in a more practical manner will be difficult.

A best practice is to separate both CapEx and OpEx into three categories: strategic, deferred and lights-on. Capital expenditures that create future revenues should be bucketed as strategic. Capital projects that you didn't implement (due to budget cuts or other cost-containment reasons) but which are necessary for growth should be categorized as deferred. Finally, spending as a part of annual refresh projects should be categorized as lights-on. Operational expenditures

should be treated the same way: Remember that all capital expenditures result in ongoing expenses.

How you categorize your expenditures can affect your company's valuation. During an acquisition, for example, a significant amount of deferred capital spending may lower the company's overall value from a buyer's perspective. A large amount of deferred CapEx indicates that the company's overall investment in technology has not kept pace with the company's business plan, corporate strategy or comparative industry capability. These technology costs could be assumed by the buyer.

No one is expecting to review an "nth" degree of detail, but you have to choose the amount of detail that will give other business leaders confidence that they know the total cost-benefit of operations at a product or service level.

A sound and detailed budget provides an important lens into the performance of the IT organization. For the CIO, financial management habits and overall acumen may be the tipping point in deciding whether he or she is invited to the party at the executive table or left in the dark.

Albert R. Eng advises companies on IT strategy, offshoring, operations turnaround and post-acquisition activity. Contact him at aeng@cerbadvisary.com.

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BY JUAN CARLOS
PÉREZ

Capacity Manager

job description: A capacity manager makes sure a company has the right amount of IT resources to support the business—not more, not less. It's their job to determine if the current IT infrastructure is being utilized optimally and, if not, what changes should be made. "It's a unique job within IT. The capacity manager is responsible for monitoring, analyzing and projecting whether the organization has sufficient computing capacity to do what it needs to do," says Dave Van De Voort, a principal at Mercer.

and goals. Strong leadership skills are key. "IT propeller-heads will probably be overwhelmed in this position," says Evelyn Hubbert, a Forrester senior analyst. Candidates should be process oriented.

elimination round:

Ask candidates their perspective on service management. "Capacity managers need a service attitude to understand what is wanted by the lines of business and what IT can deliver," says Hubbert.

why you need one:

"If you aren't doing capacity management, you're likely to either underinvest in IT, which will affect your operations, or you'll have excess capacity and overspend in systems you don't need," says Van De Voort. Striking this balance is critical for competitive reasons, says John Estes, vice president at Robert Half Technology. "The more efficient you can be with your IT assets,

the more flexibility you'll have, either by being more efficient with what you've got or by purchasing new products." The rapid adoption of virtualization technology, the cloud computing trend and the pressure on CIOs to get the most return on investment from IT purchases have helped to make this a "hot job" in recent years.

desired skills:

A strong technical background in key aspects of IT infrastructure, including desktop hardware, enterprise applications, databases, storage, networks and all types of servers. Must be good at budgets and math, since forecasting, statistical analysis and modeling are part of the job. Six years

of related experience is generally required.

how to find one:

Look for candidates in companies that make strong IT investments and view IT as a vehicle for gaining a competitive edge, not as an expense item. Consider IT consultants who are employed by large vendors like EMC, Oracle and SAP, says Carlo Carbetta, vice president of operations development at CIO Partners.

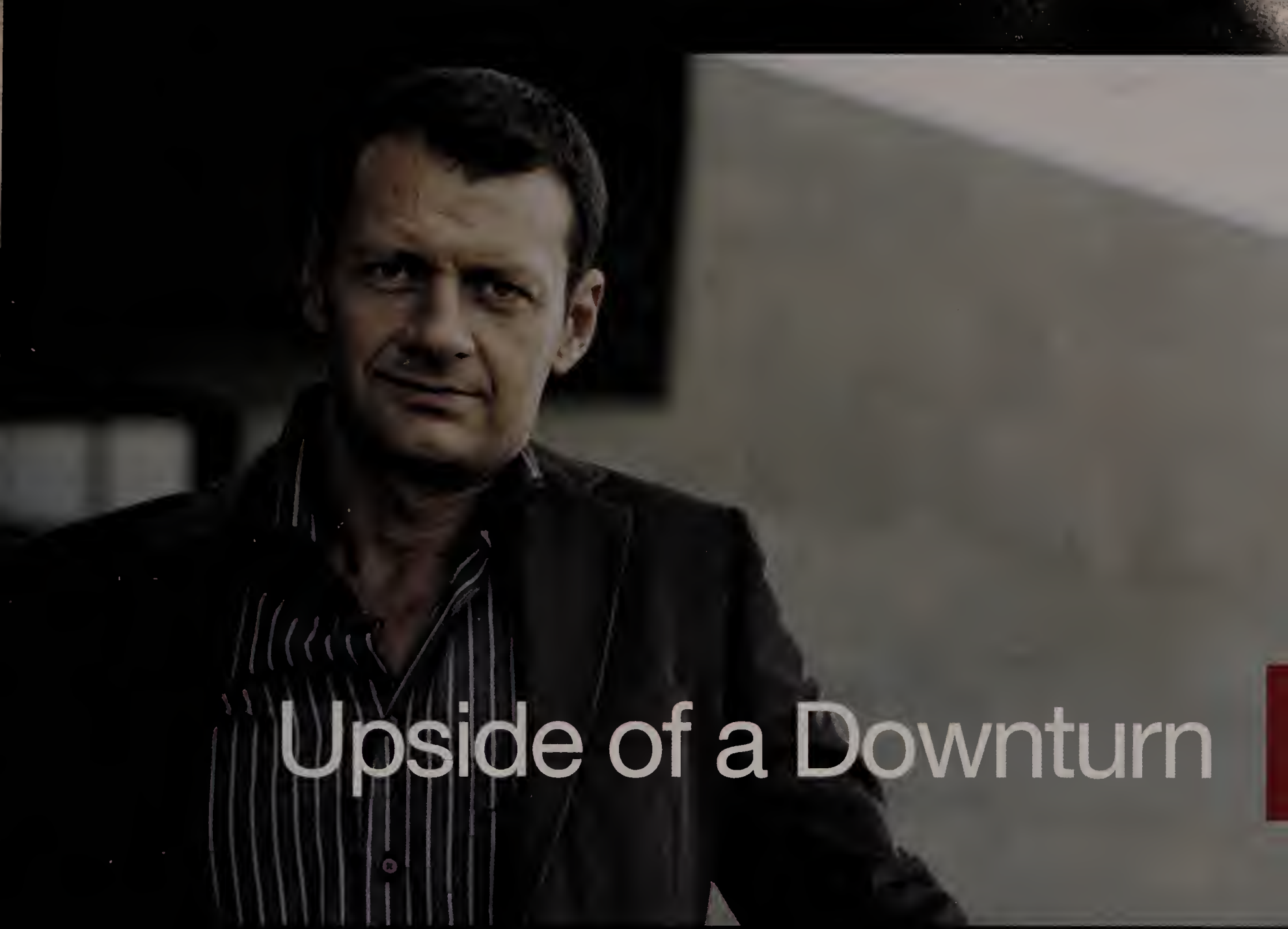
what to look for:

"You want someone who is highly detailed in their work, very influencing, engaging and people oriented," Carbetta says. They must be able to explain technology to business managers and relate it to business plans

growing your own:

Good internal candidates include network administrators or engineers who moved up to business analysts or project managers involved with performance tuning, forecasting and management. They must have "a good nose for the tech aspect of performance management and capacity planning, but also understand the big picture and how what they do relates to the bottom line," Estes says.

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Upside of a Downturn

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MOVING TARGET

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President Obama aims to fix U.S. cybersecurity.
Will his plan hit the mark?

BY KIM S. NASH

HAPPY BIRTHDAY, AMERICA.

We're not as safe as we think. From the electricity grid to the banking system to the defense contractors building our most sophisticated weapons, computers running the nation's critical infrastructure see relentless attacks from criminals and countries alike. Some-

times we hear about it, sometimes we don't.

In the last year, the Federal Aviation Administration (FAA), the Department of Defense (DoD) and the ATM banking system have all been attacked in concerted, organized ways by people who have yet to be apprehended. Hardening critical infrastructure systems in industries as diverse as defense, electricity, financial services and telecommunications will take millions of dollars, perhaps many years and massive political clout. President Barack Obama says he wants to do it. IT leaders want to know how.

"I would be looking for a path and partnership," says Bruce Larson, former security director at American Water Works, a \$2.3 billion utility that serves 32 states and part of Canada. Part of the problem is that government and industry don't share enough information, he says. "Government



Bruce Larson, former security director at American Water Works, thinks market forces can provide incentives for companies to monitor themselves.

needs information from the private sector about how bad [corporate vulnerabilities are] and what the impact could be. And the private sector needs information about what the real threat might be."

CIOs know that addressing security problems is expensive and largely thankless. Few leaders get pats on the back for preventing crimes and breaches. Some CIOs are wary of government getting too involved in dictating technology standards and choices. But increasing threats bring an urgent need for change in both corporate and government realms, says Paul Kurtz, a partner at security and counterterrorism firm Good Harbor Consulting. Kurtz is a former senior advisor to former Presidents Bill Clinton and George W. Bush on national and homeland security.

"For every month that passes without real leadership and decisive action on part of government, we hemorrhage billions in intellectual property stolen," Kurtz says. "Critical systems that support power, oil and gas, aviation, military operations—they are all placed at risk."

What's Going Wrong

Last November, in what the Federal Bureau of Investigation (FBI) calls a "coordinated attack" on automated teller machines in major cities, a "criminal organization" used 100 fake payroll and gift cards to steal \$9 million in 30 minutes. The FBI has issued a plea for help identifying men in images caught on video surveillance cameras in Atlanta.

U.S. financial systems, of course, are a favorite target of both casual and serious hackers. The worry is that focused attacks will hit the 17 other sectors deemed critical infrastructure, which include energy, agriculture, transportation, telecommunications, health care, defense contractors and nuclear facilities. As companies collaborate over the Internet, and core IT systems rely more on the public network, vulnerabilities increase. Threats to federal and infrastructure IT systems "are evolving and growing," says the Government Accountability Office (GAO). Security incidents reported to US-CERT, a government organization that tracks security, tripled from 5,500 in 2006 to 16,800 last year.

In April, for example, government officials confirmed that since 2007, hackers have been slipping into computer systems behind the Joint Strike Fighter weapons project. They gained access through defense contractors on the project, which Lockheed Martin is leading. Through these private-sector entry points, the spies have gotten away with several terabytes of design and electronics system data, the officials told *The Wall Street Journal*. The invaders are thought to be in China.

In February, a FAA website was hacked, exposing data on 48,000 current and former employees, according to a recent audit by the Office of Inspector General (OIG). And in 2008, the OIG says, hackers took over FAA servers in Alaska, discovered

TOUGH WORK AHEAD TO DEFEND DIGITAL INFRASTRUCTURE

Obama review defines the agenda for new cybersecurity post

Soon after he took office, President Obama asked for a wide review of the federal IT security landscape. The review's purpose: to assess what laws and regulations exist, how effective they are, what needs to be changed and how government can work with corporations to protect the country and share technology ideas.

The review, released in May, found 250 points to address in areas ranging from simply educating the public about cybersecurity to the more-complex and politically contentious issues of building a secure identity management system and devising a "cyber incident response" policy similar to how the White House monitors terrorist attacks and natural disasters. At a press conference to release the review, Obama defined the digital infrastructure as a "strategic national asset," the defense of which should be a national priority.

A privacy and civil liberties official should be added to the National Security Council, the review also advised. And to promote U.S. use of "game-changing technologies," more shared government-private sector research and development should be done.

The review didn't bowl over many security experts who have been calling for similar changes for years. Indeed, the Center for Strategic and International Studies released a report in December saying much the same thing, done by fewer people in less time. The big news was Obama's creation of the position of Cybersecurity Coordinator, reporting to him and belonging to both the national security staff as well as the National Economic Council.

It's the cross-agency reach and Obama's pledge to work closely with the private sector that will make the "cybersecurity czar" (who had not been named at press time) successful, says Eugene Schultz, CTO of consultancy Emagined Security. "Odds are higher that we will have sane management of this."

—K.S.N.

the password of an administrator in Oklahoma and got access to 40,000 FAA user names and passwords. Security testing as part of the audit identified 763 high-risk vulnerabilities, such as computers that allowed the remote execution of commands that could shut systems down or reveal sensitive data.

The Central Intelligence Agency has revealed that hackers have caused power outages by breaking into the electricity grid in unnamed countries outside the United States. This month, the North American Energy Reliability Corp. (NERC)—the U.S. electricity industry's biggest trade group—starts auditing power companies to ensure they register critical cyber-assets and comply with federal and NERC's own measures to protect them. In an April letter to members, NERC's chief security officer warns of "the potential for the simultaneous manipulation of all devices in the substation or, worse yet, across multiple substations."

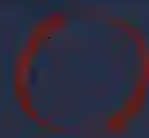
"I'm not trying to be a doomsdayer," says John Gilligan, former CIO of the U.S. Air Force and a former executive specializing in telecommunications security at SRA International. "But I can't think of anyone with real knowledge of what's going on who

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would say he feels confident in our ability to defend ourselves.”

Now an independent consultant, Gilligan recently produced what he calls the Consensus Audit Guidelines, one of many proposals for fixing federal and critical infrastructure security now zinging around Washington (see “5 Security Priorities,” at right). What has bothered Gilligan throughout his decades in IT, he says, is how many different computing standards, mandates, regulations and laws govern different parts of the government as well as critical infrastructure companies.

At least 34 federal mandates, regulations and laws apply to the IT inside companies that touch critical infrastructure in the United States, according to the GAO. What’s more, it’s a collection of rules that no one person, or even one agency or department, oversees. The assortment includes the Food and Drug Administration, Office of the Comptroller of Currency, Securities and Exchange Commission, Federal Energy Regulatory Commission and the Departments of Treasury, Homeland Security and Interior. Fragmentation means security standards across industries, measured and monitored uniformly, don’t exist. Therefore, neither does a good answer to the question, “How secure is the U.S. digital infrastructure?”

Gilligan, like other security gurus, supports the idea of an official to coordinate cybersecurity and related efforts, but warns it’s a big, political job to rationalize the crazy quilt of security mandates. The official must coordinate various federal bodies as well as private industry and academia. “Doing this, we would begin to have a cohesive strategy,” Gilligan says. “Right now, it’s free agents” working for their own organizations’ interests.

Formulating long-term strategy gets pushed aside when the focus is on dealing with daily tactical issues or “Whac-A-Mole security,” says Daniel Mintz, a CTO at consulting firm CSC and former CIO at the U.S. Department of Transportation (DoT). “The current approach of trying to do everything, everywhere, results in accomplishing little, anywhere,” he says.

Last year, under George W. Bush, the government devised a cybersecurity plan called the Comprehensive National Cyber Security Initiative, aimed mainly at protecting systems related to the Department of Homeland Security. That’s a narrow swath of cyberspace and, because the work is classified, it’s hard to tell how effective it’s been. Obama has pledged to be “transparent”

5

SECURITY PRIORITIES

A former Air Force CIO highlights practical defenses against system attacks



John Gilligan

Gaining attention for advocating a practical shift in how IT leaders think about security, the Consensus Audit Guidelines offer 20 controls to measure and monitor IT-system and network security. Though worries about increased cost often accompany any notion of improving security, John Gilligan, a consultant who developed the guidelines, says he implemented a subset of the controls when he was the Air Force CIO (from 2001 to 2005) and saved money on IT and risk management. Gilligan’s recommendations include:

1 Know your network. Inventory all devices on your network with an asset recovery tool. Record network addresses, machine names, the purpose of each device and person responsible for it. Encrypt this information. Likewise, devise an encrypted list of software authorized to run on your network. Periodically test your software inventory tool by deploying new software to see when it’s detected. Note the delay; that’s a vulnerable time.

2 Test and verify. Document and test security settings on system images before deploying laptops, workstations and servers. Sample systems once a month to see that settings are correct. Store master images on secured servers or offline machines.

3 Seize control. At network connection points, implement filters to allow use of only those ports and protocols with a documented business need. Use two-factor authentication and encrypted sessions on all network devices. Require people logging in remotely to use two-factor authentication, too.

4 Be suspicious. Set audit logs to record dates, time stamps and source and destination addresses for each piece of software. Devise profiles of common activity and tune logs to look for anomalies. Deploy firewalls to look for common Web attacks. Test source code for malware and backdoors before deploying.

5 Watch your back. Run vulnerability scans at least weekly (preferably daily). Compare sequential scans to ensure previous problems were addressed. Install critical patches within a week. Report daily on locked-out and disabled accounts, as well as accounts with passwords set to never expire or with passwords exceeding maximum age. Get explanations for these accounts. Check machines daily and push out updates for malware protection.

For more details about these and the rest of the guidelines as well as an explanation of how attackers exploit the lack of each control, visit www.gilligangroupinc.com.

—K.S.N.

about the process and seek out advice from the private sector. But the idea of government imposing new rules for industry sends up a red flag for some. Industry can usually patrol itself, maintains Larson, the former security director at American Water, provided there are market incentives to do so. “If you’re a large, publicly owned entity, your board is not going to let you get away without identifying risks and mitigating them. That’s market forces at work.”

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"Government needs information about how bad [corporate vulnerabilities are]. And the private sector needs information about what the real threat might be."

—Bruce Larson, former security director at American Water Works

The Changing Threat

When government officials officially talk security, most of the scenes they paint involve malicious people taking down major systems. In turn, we are assured that government and corporate entities have reliable backups.

But that's not the way cyberattackers are behaving, says Eugene H. Spafford, executive director of the Center for Education and Research in Information Assurance and Security. The center is affiliated with Purdue University where a year ago, then-Senator Obama held a summit on security challenges. A trend security experts say is more insidious is attacks that come as subtle changes to data rather than complete denial of service.

Corrupting data in the financial system by introducing errors would spread fear about the accuracy of bank records. People, perhaps countries, now distrustful of the system would pull their money out en masse. Computer break-ins that mess with the electric grid or the healthcare system or the air traffic control system could kill people, Spafford says.

"Suppose all the flight control systems get altered to direct planes into each other rather than have the screens go blank," he says. So far, such a calamity hasn't happened. But if it did, Spafford adds, "the result would be a lack of confidence in the system even when it was restored."

Covering the most critical security gaps, not just the obvious ones, then, becomes imperative, Gilligan says. "Especially in today's environment," he says, "it wouldn't take much to push us even further into recession or depression."

Corporate IT leaders can adopt some protection methods commonly used by government, such as encrypting sensitive data as well as application software when doing backups. But other tactics don't make sense in the corporate realm.

At the U.S. Department of Defense, for example, just 10 of its thousands of computing sites are connected to the Internet, says Rear Admiral Elizabeth Hight, vice director of the Defense Information Systems Agency, which supplies much of the infrastructure IT to the DoD.

Fewer connections to the public networks mean fewer points of vulnerability, Hight says. But today, keeping a company off the Internet probably means putting a company out of business.

Practical Solutions

So what to do? One proposal gaining attention in Washington is the Consensus Audit Guidelines. Gilligan worked to develop them with security research and training group The SANS Institute, the Center for Strategic and International Studies, as well as other security experts and practitioners inside and out-

side government. The guidelines emphasize simplicity. Rather than dive deep into technology or debate which agency should oversee another, the guidelines put forth 20 basic management and process ideas, the underlying principle of which is frequent monitoring and measuring of whatever you're doing to thwart the most common patterns of cyberattack.

The guidelines, says Eugene Schultz, CTO of consulting firm Emagined Security, "are about how you perceive the problem and how you manage it with limited resources. It's very real-world."

That's a good approach, security experts say, as cybercriminals continually adjust their patterns and tools. Not only that, but most are steps that every CIO could take today without spending a ton of money.

Within each of the 20 controls is an explanation of how attackers can exploit the area and steps you can take to prevent that, ranging from quick-win, simple tasks to advanced methods

The U.S. Department of State has been testing the guidelines for several months. John Streufert, State's chief information security officer and the deputy CIO for information security, has mapped real security attacks that he has recently experienced to Gilligan's controls to determine whether, if a given recommendation had been in place, it would have had any effect. No private-sector companies have tested the guidelines, Gilligan says, but he is talking with several federal CIOs about doing so. The Nuclear Regulatory Commission is also piloting the guidelines.

Malware is one problem lately at State, Streufert says. Control number 12—malware defenses—calls for such tasks as checking machines daily for updated malware protections and pushing out updates every day. IT should also configure machines to scan removable devices for malware upon insertion into a laptop or PC. Also suggested is taking a firm stand: deploying network access control tools to verify security configurations and patch compliance before granting network access.

State also ran scans for unauthorized hardware and software on its networks, which are controls number one and number two. Streufert is reluctant to say how much malware or how many unauthorized devices he found, or estimate the cost of the problem. But by using Gilligan's 20 techniques, and regularly measuring and improving how the State Department staff proactively manages security, State has reduced the internal risk scores it gives itself in several critical areas by 83 percent over 11 months, Streufert says.

An End to Checklist Security

Existing federal IT security regulations—namely the Federal Information Security Management Act, or FISMA—often man-

date hundreds of items to check off on a list, including such basics as password protection for sensitive applications. But FISMA doesn't guide IT managers about what kind of password works best (the Consensus Audit Guidelines call for 12 semirandom characters and two-factor authentication).

"You end up filling out long forms showing you comply but you're not necessarily secure," says Schultz of Emagined Security. He tells the story of a national laboratory that didn't have firewalls protecting its network, as mandated. But the lab passed the audit by convincing the auditor that routers were a worthy substitute, Schultz says.

"FISMA is a waste of taxpayer money," he says. "These are not standards that help an organization stand up to the kinds of attacks that occur nowadays."

None of Gilligan's 20 critical controls "is advancing the state of the art," Gilligan acknowledges, meaning that many security experts could come up with a similar recommendations. But the fact that it's spelled out in a prioritized list and known to be effective in protecting IT systems removes the guesswork. Organizations have a clear rule to follow and a procedure for implementing it, monitoring it and measuring it to improve ongoing security protections.

That's different from checklist compliance. "It's a culture shift we're advocating," Gilligan says. Measurement of progress is key. In many organizations—government and private sector

alike—fights emerge over basic definitions of "secure," never mind how to achieve it, adds CSC's Mintz. When he was CIO at the DoT, he says, "it became clear that there was no generally agreed to way of measuring how secure we were. If you considered perfectly secure as a 10 and no security at all as a one, we knew we were above a one and below a 10, but that was about it."

That's the kind of situation Obama has criticized. "It's now clear this cyberthreat is one of the most serious economic and national security challenges we face as a nation," he said in May. "It's also clear that we're not as prepared as we should be, as a government or as a country." (See "Tough Work Ahead to Defend Digital Infrastructure," Page 28.)

Bigger thinking is needed, Obama said. "Just as we failed in the past to invest in our physical infrastructure—our roads, our bridges and rails—we've failed to invest in the security of our digital infrastructure."

Gilligan knows his is one of dozens of proposals vying for attention from the Obama administration, including ones from various industry trade groups aimed to influence whatever new rules emerge.

The Cost of Being Secure

In government and in corporate America, concerns about immediate cost can outweigh concerns about long-term safety.

"We had a customer come on board that was hosting at a competitor's facility. They decided to switch to SunGard, because they felt their current provider wasn't responding to their needs."

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"Think of the Manhattan Project or the space race. We need that in cybersecurity."

—Eugene H. Spafford, executive director, Center for Education and Research in Information Assurance and Security

"There is concern that fixing some of the security problems will be expensive and harmful in the economy," Spafford says. The Department of Homeland Security, for example, has requested \$918 million for fiscal 2010 for information technology. That's 15 percent more than 2009 and that's before Obama has made any cybersecurity moves.

In health care, to spur providers to enter the 21st century, Obama has designated \$19.2 billion in stimulus money as available in return for building electronic medical records, computerized order entry and other tech-enabled medical processes. Providing such incentives to banks, power companies and transportation providers in return for updating their security is a good start, says Kurtz of Good Harbor, but it promotes too much short-term thinking.

"That would bring us back to checklists again," he predicts, as companies could scramble to meet minimum requirements by a deadline rather than plan a larger, longer-term strategy.

Short-term thinking is a national problem, agrees Spafford.

Banks please shareholders quarter by quarter. Carmakers can't think much beyond the current model. And look what happened to those industries. To average citizens, cybersecurity is less pressing on any given day than paying the mortgage, keeping or finding a job and avoiding swine flu. Obama has to make cyberpolicy urgent enough to overcome "the real world," as Spafford puts it. Spafford and other security experts praise Obama for bringing attention to the digital world upon which the United States so depends. But Obama's report, which urges government and industry to work together to unify security practices and metrics, espouses nothing new. They're hoping, rather, for inspiration to reach new heights.

"We need high-intensity, long-term development efforts," Spafford says. "Think of the Manhattan Project or the space race. We need that in cybersecurity." **CIO**

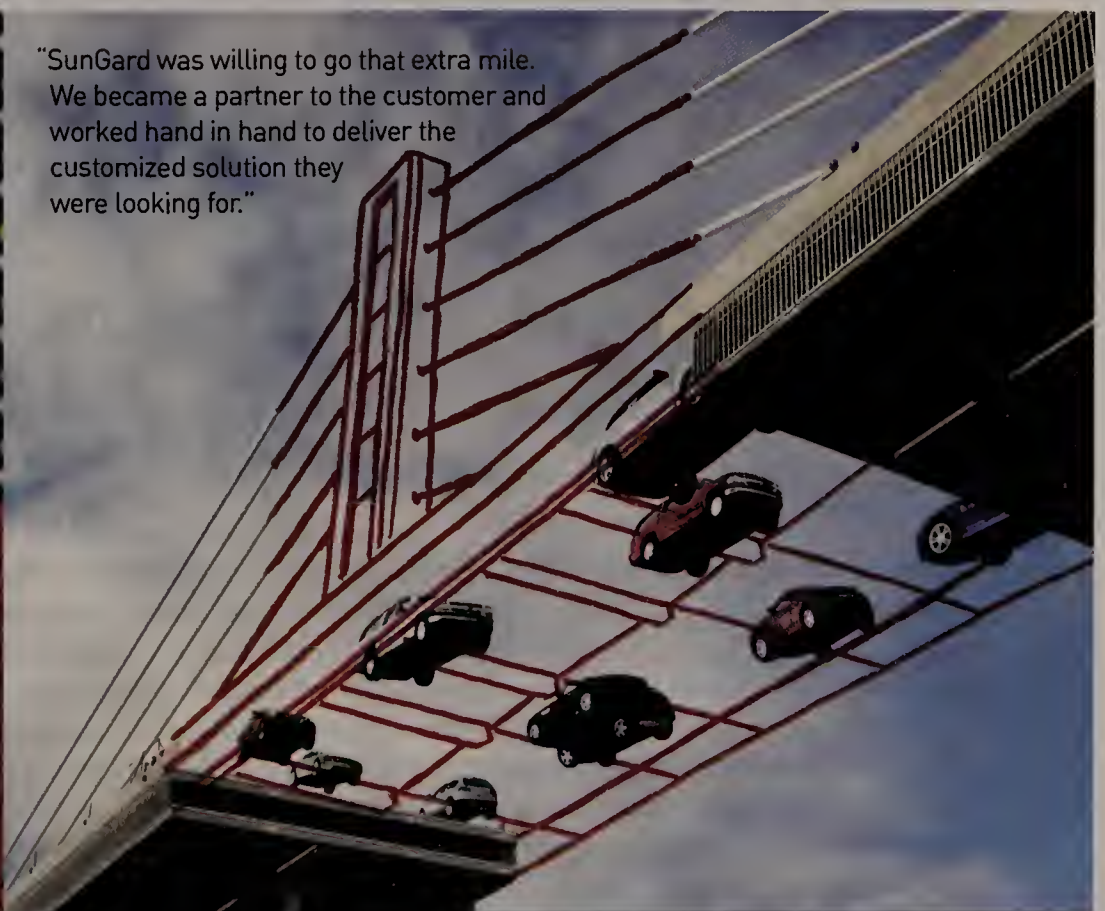
Senior Editor Kim S. Nash can be reached at knash@cio.com. Follow her on Twitter at www.twitter.com/knash99.

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Sandy Koppelman
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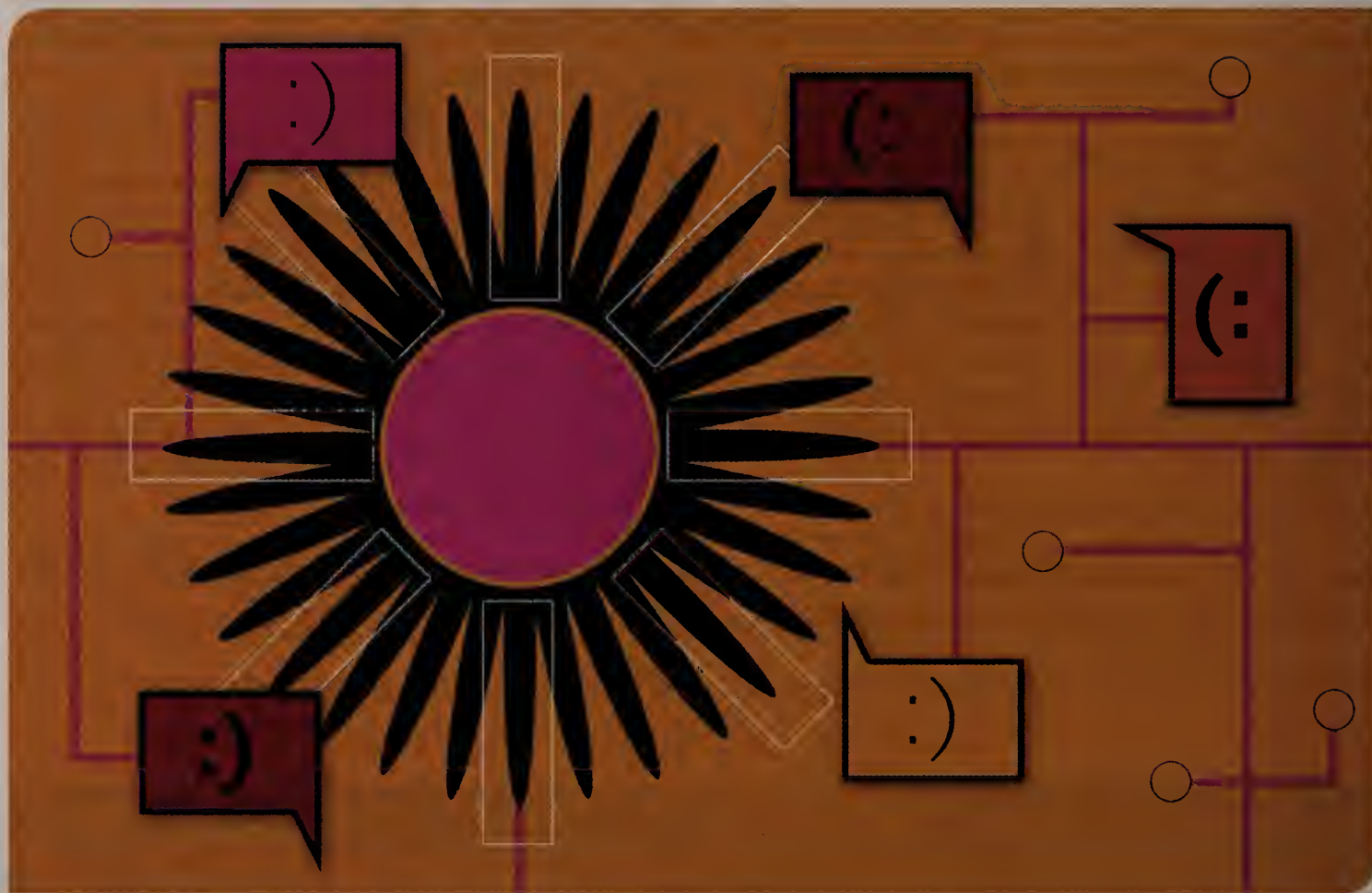
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CIOs advise an organic approach to cultivate Web 2.0 momentum in the enterprise

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We snuck social networking into our enterprise, rolling out Microsoft Office Communicator to all 1,100 employees without fanfare to see who would pick it up. It certainly helped that the product fully integrated with our e-mail, but it only took a few months for almost half of our business users to embrace the technology for keeping in touch with their teams. Since they discovered the benefits on their own, people were enthusiastic about sharing their success, and those who weren't using it yet saw the advantages in daily use all around them.

Our IT group stepped forward then with official internal marketing and communication to leverage that momentum. We also took advantage of those who were driving that adoption to test the MS SharePoint MySites that will replace our intranet ►►►

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Rick Meuser,
Director, IT, Silgan
Plastics



Drew Martin,
Senior VP and CIO,
Sony Electronics



**Athelene
Gieseeman,** CIO,
Stinson Morrison
Hecker

and make it easier to find experts spread across the country. Since these are the people who are familiar with public social networking sites, it was simple for them to set up their skill and responsibility profiles, and we're sure they will broadcast the benefits.

DREW MARTIN, SONY ELECTRONICS
LET USERS INFORM THE EXPERIENCE

Sony employees are embracing social networking technologies across every working style and generation, but as a consumer products company, we knew it was important to bring these solutions to our customers as well. Our forays into the public Web 2.0 world, however, came with critical lessons.

We initially conceived our public blog to be a two-way means of communication, but we were quickly overwhelmed by comments voicing opinions and seeking answers about our products. We have fundamentally changed how we approach that space: The blog is now complimented with a community for users to interact with us or with each other. Interest in this from our business groups then drove us to choose a platform to create segment-specific communities.

It also became obvious that we are no longer in a world where if you build a terrific site, customers will come to you; now you have to fish where the fish are. For us, that means establishing a presence on everything from YouTube to Flickr, and even exploring the uses of virtual-world environments, which we're bringing to the commercial side with virtual trade shows.

ATHELENE GIESEMAN, STINSON MORRISON HECKER
LEARN HOW TO RELINQUISH CONTROL

Web 2.0 requires that you turn over the experience to the end user. That's not normal, nor is it comfortable, for IT departments. Even with confidentiality at top of mind, many of our attorneys were excited to use these tools for business. It was disconcerting to find that we were in the role of business "disablers" because of security or other concerns.

No matter how much we read about social networking, there is no way to know how solutions will or will not fit in your environment until you've gotten out there and used them. With Web 2.0, it's easy to do that. In addition, we plan to establish a task force to gather best practices from our people. We have found that some who have two Facebook accounts want to use pseudonyms for one, and we now need to decide whether—or under what circumstances—a pseudonym can be used for official firm communications. We're also looking at the possibilities demonstrated by a decision by one state's bar association to accept credits from a class taught in Second Life.

As CIOs, we all know there needs to be some level of control in a corporate environment, but these technologies are designed to thrive without central oversight. We must experience that to draw our own line without diminishing their benefit.

download

Personnel Matrix Models for IT Support

Who: Rajeev Ravindran, CTO
JM Family Enterprises

What: A method for managing IT support resources across functional lines

Why: JM Family Enterprises services car buyers and owners through sales and financing. The IT operations support group that stands behind that service is often in fire-fighting mode, and the company needed a better way to respond rapidly and flexibly with the right resources.

How: The IT support matrix models enable IT's support leads to view, select and assign the most appropriate support personnel from across the enterprise based on their functional associations and technical skills ratings. If a problem involves security on the network, the assigned support lead can check the functional matrix and identify personnel aligned with network systems as well as with security. The lead has the authority to pull the best-qualified people from both areas and pair them up on the problem. If the problem involves a tricky firewall issue, the lead can also consult the skills matrix to check who has a high expertise rating in firewalls.

"The concept we are striving for is 'One Management Team,'" Ravindran says. "The matrix and the authority invested in the support leads make the concept a reality."



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Live Council Teleconference

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PANELISTS

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- **Susan Faulkner**, Director of IS and Technology, Bluewave Energy
- **Michael Kohlman**, IS Manager, Cook Group
- **Chris Kohl**, VP and CIO, Vertex



To register go to council.cio.com.

Inside the Change Studio

Quintiles Transnational CIO
Bill Deam casts users in the act of business transformation



What's a good way to ensure acceptance of process transformation?

A method I am using to achieve transformation and acceptance in one go is with two programs running in parallel. One determines the "to-be" process and the other focuses on getting people to want to work the new way. We use this parallel process because the two groups influence and support each other. It does us no good to run with a new idea from the process-defining group if the change-management group finds it impossible to move people from the old process to the new.

Our goal is to reduce by at least 20 percent the time it takes to test and approve new drugs. In my experience, this level of transformation can't be driven by us

in IT saying, "Here is a new system that works this way." The people on the front line must determine how to strip out complexity and improve their workflow, and IT supports them.

Think Visually

On the process side, we set up a group of business-user domain experts in a big room with whiteboard-painted walls to work out the end-to-end "to-be" state. The experts outlined the current model on one wall and spent several months with that information all around them for reference as they negotiated the creation of the "to-be" state. They then mapped proposed processes on the opposite wall, drawing

connections between new and old.

The function leaders who walk through the mapped-out process to validate the changes love this approach. People want to understand their new roles, not what a new system will look like.

Act Out

At the same time, our second group has been working out what individuals must change to perform the to-be-state processes. They do this by walking through the new processes in labs that mirror the existing environment—from clinical monitors to call-center personnel.

This is particularly useful when the domain experts aren't

sure about a new process. The experience of the "actors" informs the necessary changes in a way that hypotheticals never could. And if something doesn't work the way the experts expect, that process is sent back to the whiteboard team to have another go.

No matter your method, your mantra should be, "Try, learn, adapt." Take advantage of users and their ideas to ensure a better result and level of acceptance. Everyone wants to be part of a process they helped improve.

Deam is executive VP and CIO at consultancy Quintiles Transnational and a Council advisor. E-mail mentor topics to connect@cio.com.



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Stumble and Recover

How the CIO of Santander Consumer USA restored his right to be strategic

BY DON GOIN

If only all problems could be solved in one meeting with the CEO. My team had done an admirable job of becoming more strategic and partnering with the business. But then when the business was relying on us most, we blew our credibility and experienced a real possibility of losing our strategic ground.

In late 2007, Santander Consumer USA entered into a period of high change across the company, and we were really stepping on the gas. For the past few years, IT had become involved in a more strategic role and, in many cases, we were in the driver's seat for long-term business solutions and customer interaction. But this time, the company's operational mode was different, and we started feeling pressure from the business units to perform with more precision to ensure stability. In previous years, my peers in customer-facing leadership roles were accepting of a higher defect rate in exchange for rapid delivery. Now we were being asked to deliver quickly *and* have zero defects.

As market-driven initiatives ramped up and demand increased, we stumbled on the run side, and I found myself fighting against being forced to temporarily give up our strategy role. Negative perceptions of our operational capability compounded the situation, undermining the competent image that had earned us a shot as a more strategic driver.

I found my solution in an effort already underway. I had been assessing our IT capability using the CIO Executive Council's Future-State CIO Model, which illustrates how CIOs serve the business from a tactical/operational role through a strategy-oriented role. That helped crystallize the problem, and I realized what I had to do.

First I pledged to my business peers that IT would put a renewed focus on systems operations and support and on laying out key metrics to measure improvement. I also explained the importance of IT's presence in strategic conversations if we were going to develop and implement solutions that would serve Santander well into the future.

I did not expect our CEO to be as easy to convince, despite our close relationship. I used the Future-State model (see council.cio.com/programs/future_state.html) to visualize why IT needed to not only deliver operational excellence but continue to be part of the strategic planning. That model outlines three general areas of focus for CIOs:

- **Function Head:** focused on activities facing the IT organization, which are intended to achieve IT operational excellence;

- **Transformational Leader:** focused on creating change for the enterprise through close partnerships with business operations and cross-functional corporate departments; and

- **Business Strategist:** focused on driving business strategy for competitive advantage.

I pointed out that while a Function Head CIO could deliver great service, my team and I needed to also operate as Business Strategists in order to provide systems and support that would satisfy more than the short-term needs. We needed the time and space to both assess the impact of our market-driven solutions and to think long-term about service sustainability.

It took that visualization for the CEO and me to reach a renewed understanding.

Without a model to guide me in how to guide him, I doubt I would have brought him to this point that quickly.

I have also come to realize that business alignment isn't just about capturing business objectives and driving them down into the IT organization. Business alignment is about adapting to the changing needs of the business and operating as one executive team. I have to be prepared to be a function head, a transformational leader and a business strategist, and employ varying emphasis in these areas to adapt to the business needs as they change over time.

I did not expect our CEO to be as easy to convince, despite our close relationship.

Don Goin is CIO of Santander Consumer USA, an auto loan finance company, and a member of the CIO Executive Council.

Optimizing SharePoint

CIOs Seek to Control, Improve SharePoint Investments

Organizations are reaping the benefits of using Microsoft SharePoint. But challenges persist, and CIOs are seeking ways to gain greater value from the technology, according to a recent IDG Research Services survey.

Among the many business benefits in using SharePoint is greater collaboration resulting in increased productivity. SharePoint's user-friendly interface and structure enable employees at all levels to build document-sharing sites and streamline business processes.

The downside: Rapid adoption of SharePoint-related tools can result in an overload of sites and duplicate documents. Often, sites sit dormant, and a multitude of documents increases storage costs; both situations create concern for IT executives.

These benefits and challenges are highlighted by CIOs and IT leaders in a recent study conducted by IDG Research Services, on behalf of Open Text Corp., a leading enterprise content management software provider. The survey reveals:

- **62 percent of CIOs and IT leaders view SharePoint as critical to their IT infrastructure;**
- **55 percent report that SharePoint challenges—including duplicate or multiple document versions and difficulty searching sites—have had an impact on their businesses.**

"I think that in most organizations, SharePoint has grown sometimes in an unchecked and unmanaged way, sometimes underneath the purview of IT management," says Ed Durst, the portfolio manager of

the Microsoft Solutions Group at Open Text Corp. He continues, "I believe there's a desire to gain back control of that infrastructure."

Indeed, 33 percent of CIOs and IT leaders report they are actively seeking a technology solution to help them reap the benefits of SharePoint while maintaining control of these environments.

MANAGEMENT CHALLENGES

According to the IDG study, 86 percent of organizations use SharePoint primarily for document management. Yet the volume of documents is creating some headaches; 42 percent of CIOs and IT leaders say that duplicate documents, some of them with content that is obsolete, are littering their SharePoint environments.

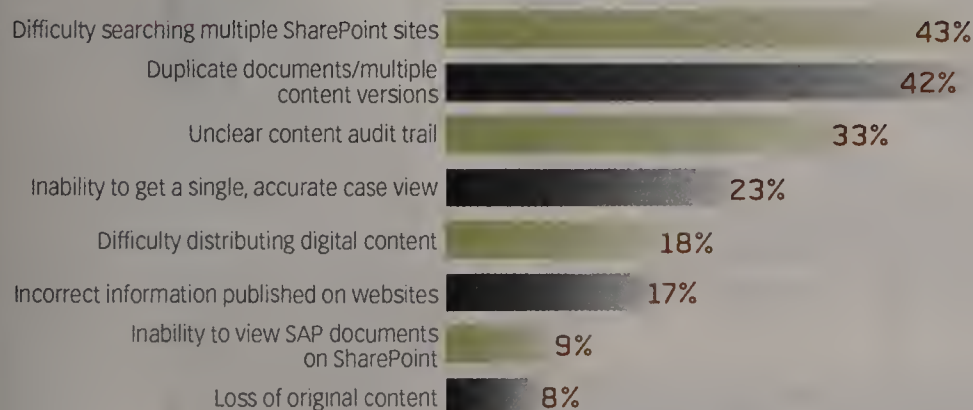
"We do have a lot of project teams that are maintaining SharePoint sites, and data just kind of stays there forever, so cleanup has been an issue for us," says David DeWall, a senior IT executive for Erie Indemnity Co., a publicly traded insurance company based in Erie, Pa.

Other challenges lie in the inherent decentralization of information in SharePoint. This manifests itself when teams struggle to find important content among separate sites. For example, 43 percent of respondents say employees have difficulty searching for documents and other content across SharePoint sites.

Offsetting all these challenges is the inherent value that IT leaders report from their SharePoint investments. For example, they say that access to quality information is enabling better and faster decision-making, as well as improved productivity and time savings. And it's these valuable business benefits that are causing them to seek SharePoint remedies—both internally and from investments in new technology solutions.

Read what CIOs and IT leaders are saying about SharePoint by downloading the white paper titled "Optimizing SharePoint for Business Advantage" at www.cio.com/whitepapers/opentext.

Users' Top SharePoint Pain Points



SOURCE: IDG Research Services, April 2009

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Wish You Weren't Here

Do everyone a favor and take your vacation **BY KIM S. NASH**

Stress necessitates rest, and yet a recessionary pressure-cooker of a workplace has some IT leaders scared to take their due vacation time.

According to Expedia's 2009 vacation survey, about one-third of U.S. workers don't use all of their vacation days. And an informal query of our own CIO Forum on Facebook reveals a certain bitterness about vacation plans (or lack thereof).

"Vacation? Ha!" says Shawn Beighle, CIO of International Republican Institute, a nonprofit that helps to advance democracy worldwide. "My boss has been on me to take more time off, and though I know he's sincere, there's just too much to do," Beighle says.

Others, though, have conceded that skipping vacation is counterproductive. Constant work inhibits calm, clear thinking and the generation of fresh ideas, says Jason Paulsen, a project manager at MAC Cosmetics. "Vacation gives you a chance to come back to tasks with a new ▶▶▶



PHOTO BY CORBIS

perspective and more energy.”

Darrel Raynor, interim CIO and founder and managing director of turnaround consultancy Data Analysis & Results, plans to take his family twice this summer (four times a year) to their timeshare in Mexico. “Have to have that balance,” he says. Swine flu be damned.

Indeed, CIOs can and should set a healthy example by taking time off, says Diane Morello, a vice president and fellow at Gartner. Perhaps not a decadent three weeks in Bali, she says, but certainly a solid week at a time and weekends bracketed by extra vacation days is reasonable.

Doing so shows you’re a leader who values work-life balance and that you trust your group to work well even when you’re not there. “If you’ve spent the time in advance to lay out an effective organization, urgent issues can be handled by a path other than one through you,” she says.

Still, unease has set in as IT work—and layoffs—continue.

“With increased demands to do more with less and the fact that we are so short-staffed, I’m not in the position to take long vacations,” says Steve Tomasco, director of IT at Flagship Credit. “I constantly feel like I am running uphill and I don’t want to let anything get past me.”

Even extended weekends find Tomasco connected to the office via BlackBerry, he says. “Never really leaving the office has become the norm.”

Jay Hall, manager of information systems at the Missouri National Education Association, a public school advocacy group, typically takes just 12 of his 25

allotted days off. He sells back the rest but acknowledges “it takes a tremendous toll on my motivation at work.” When he does vacation, he’s exhausted, he says, adding that he once fell asleep while snorkeling in Jamaica.

The balance was similarly skewed at import-export firm GHY International until it actually forced its employees out the door. These days, GHY is considered among Canada’s best places to work, but in 2006 it was so bad that vice president of IT Nigel Fortlage took just 25 percent of his due time off and saw the rest of his group follow suit.

“IT was the worst for not taking holiday time,” he says. “And it took two years to get all holiday time caught up.”

Despite smaller staffs and added pressure, the time to make a vacation push may be now. As busy as we are, the pace will quicken when the economy rebounds, notes Gartner’s Morello. CIOs should know that, she says, and keep their teams “refreshed” with regular time off.

**As busy as we
are right now,
the pace will
quicken when
the economy
rebounds.**

—Diane Morello, Gartner

Senior Editor Kim S. Nash can be reached at knosh@cio.com. Follow her on Twitter at twitter.com/knosh99.

three-
minute
coach



Help!

How can I get recruiters to call me with great jobs?

COACH: MARK POLANSKY,

SENIOR CLIENT PARTNER & MANAGING DIRECTOR
I.T. OFFICERS PRACTICE, KORN/FERRY INTERNATIONAL

⌚ **Always** try to target a single recruiter within a particular firm rather than throw out a wide net to many recruiters at a firm. Building a personal relationship with a recruiter is not your goal. Your goal is to be recognized by a recruiter as a standout and highly qualified candidate.

Do your homework and identify the recruiter who is most appropriate for your background. If possible, network through someone who knows that recruiter and can make a personal introduction. Cold calls don’t usually yield the best results.

Follow up with a brief e-mail with your résumé attached. Always be transparent and honest when you’re making claims in your résumé, says Polansky. “We will check you out and will not want to represent folks who seem to have exaggerated or expanded upon their experiences.”

⌚ **Sometimes** you can stand out by sharing information, market knowledge or contacts with recruiters. This allows you to maintain contact with a group of recruiters you may be targeting while showing them that you know what’s happening within your industry. By being helpful, you stay top of mind when good jobs come along.

⌚ **Never** ignore a recruiter’s call—you may need that connection some day. Even if you are not interested in hearing about new opportunities, be responsive and offer referrals whenever possible.

Do not feign interest in a job simply to get face time with a recruiter. You will not be taken seriously the next time a potential job comes up. You also do not want to be too narrow in your job search focus in this economy. You may inadvertently limit your options.

Mark Polansky has worked in the field of executive search for more than 25 years, extensively recruiting CIOs, CTOs and other senior IT leaders.



Take Your Career Global

Time spent working abroad can lead to great growth opportunities

BY MARTHA HELLER

At barely 25 years old, the CIO profession is still young. We can't yet define a standard CIO career path, but we can identify some critical experiences. And working outside one's own country is one of them.

It may seem easy: Convince the family it's time to move, raise your hand for a plum assignment, pick up a copy of *Saudi Arabia for Dummies* and book your flight. But life as an ex-pat CIO can be harder than it looks.

Know your personal limits. In 1997, Curt Petrucelli moved from Pfizer's U.S. IT organization to run European IT in Brussels. "With the company globalizing, I realized that I could not compete for senior roles if I never left New York City," says Petrucelli, now U.S. CIO of AstraZeneca.

"My first step was to talk with my family about location," says Petrucelli. "This way, when opportunities arose, I could be clear about my availability."

Brussels proved to be the right fit for Petrucelli. He not only returned to the states with a broadened cultural perspective, he believes the experience was "one of the reasons I was hired for the AstraZeneca role."

Acclimate before you manage. "The first six months is a significant adjustment as your family acclimates and you do your new job and maintain ties back home," says Petrucelli. "If you plan for managing your time, it will help when the pressure hits."

Ten years ago Pieter Schoehuijs left his job with IBM in the Netherlands and moved to Texas as Flowserve's IT director. Six years later, he became CIO of Engelhard, then BASF and then Church & Dwight in 2007. He's learned to leave time to adapt.

"The culture of your company will be grounded in the culture of the country," says Schoehuijs. "Arrive a few weeks early and get to know the culture before you start work."

For example, you'll want to learn the appropriate tone to take during performance reviews and how a particular country tends to handle letting people go. "There are cultural nuances that impact workforce management," says Schoehuijs. "If you don't get them right, you can cause problems."

Mike Capone, CIO of ADP, joined the company out of college and rotated through everything from product development to finance to IT before being selected for a team needed to integrate a large, overseas acquisition. He suggests CIOs rely on old networks as well as build new ones while they settle into a new job overseas.

"You will face situations you've never faced before," says Capone. "How do you set up call centers in central Europe? How do you attract local talent?" I relied on my networks to compare notes."

Capone found new relationships with tax, treasury and real estate locals. "People I had never worked with became my best friends. Take them out to dinner early," he says.

Question everything. "You'll find some deep cultural assumptions about what you can do with your operations," says Capone. "People may assume a service doesn't sync up with a country's regulations, but have never checked. You may find a different answer."

Martha Heller is managing director of the IT Leadership Practice at ZRG Partners, an executive recruiting firm. You can reach her at mheller@zrgroup.com or read her columns at www.cio.com/author/41283.

Life as an ex-pat CIO can be harder than it looks.



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Just Chill

It may be summer now, but on New Hampshire's Mt. Washington, it just about always feels like winter. The 6,288-foot mountain boasts a near-constant combination of severe cold, fog, snow, rain and high winds (it's where the world's highest surface wind speed—231 miles per hour—was recorded on April 12, 1934). On the summit, a rotating crew keeps a 24-hour record of the weather conditions. "We have a lot of computers, and we run database applications," says Steven Welsh, whose title, IT observer, speaks to his dual role as weather observer and IT manager. There is also a radio to maintain for communicating with the valley below, as well as connections between the computers and weather instruments. "There's always stuff breaking," Welsh says. "You can phone someone for advice, but nobody is going to come and help you." In bad winter weather, repairs may have to wait. When the winds clock over 90 m.p.h. and it's 20 degrees below, "if you take your mittens off for just a few seconds, you're going to get frost bite." —*Thomas Wailgum*

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